

Volume 24 1995

ISSN 0929-8215  
CODEN JNEMEE

# JOURNAL OF NEW MUSIC RESEARCH

(formerly INTERFACE)

EDITORS

MARC LEMAN AND PAUL BERG

# Journal of New Music Research

(formerly Interface)

## Editors

Marc Leman, Institute for Psychoacoustics and Electronic Music, University of Ghent, Blandijnberg 2, B-9000 Ghent, Belgium. Tel. +32-9-264-4125, Fax +32-9-264-4196, e-mail: marc.leman@rug.ac.be

Paul Berg, Royal Conservatory, Juliana van Stolberglaan 1, 2595 CA The Hague, The Netherlands. Tel. +31-70-381-4251, Fax +31-70-385-3941, e-mail: paul@koncon.nl

## Associate Editors

Antonio Camurri, DIST, University of Genoa, Italy.

Roger Dannenberg, School of Computer Science, Carnegie Mellon University, Pittsburgh, USA.

Robert Rowe, Department of Music, New York University, NY 10003, USA.

Tamas Ungvary, Institute for Electroacoustic and Experimental Music, Vienna, Austria.

## Book Review Editor

Alan Marsden, Department of Music, Queen's University, Belfast, Northern Ireland.

## Advisory Editors

Charles Ames, Buffalo, USA

Konrad Boehmer, Amsterdam, The Netherlands

Jean-Pierre Boon, Brussels, Belgium

Jan L. Broeckx, Deurle, Belgium

Chris Chafe, Stanford, USA

Giovanni De Poli, Padua, Italy

Ricardo Dal Farra, Buenos Aires, Argentina

Henkjan Honing, Amsterdam, The Netherlands

Jukka Louhivuori, Jyväskylä, Finland

Alan Marsden, Belfast, Northern Ireland

Marcel Mesnage, Brussels, Belgium

Richard Parncutt, Keele, England

Henri Pousseur, Liege, Belgium

Dirk-Jan Povel, Nijmegen, The Netherlands

Jean-Claude Risset, Marseille, France

Herman Sabbe, Ghent, Belgium

Naoki Saiwaki, Osaka, Japan

Heinrich Taube, Karlsruhe, Germany

Stan Tempelaars, The Hague, The Netherlands

Barry Truax, Burnaby, Canada

Elena Ungeheuer, Bonn, Germany

Leon Van Noorden, Brussels, Belgium

Frits Weiland, Utrecht, The Netherlands

Trevor Wishart, York, England

## Publication programme 1995: Volume 24 (4 issues).

## Subscription prices and ordering information

Institutions: Dfl. 445.00 including postage and handling.

Individuals (no institutions, libraries, hospitals, etc.) can subscribe at the reduced rate of Dfl. 95.00.

Individuals must declare that the subscription is for their own private use, it will not replace any existing institutional subscription, and that it will not be put at the disposal of any library.

Subscriptions should be sent to **Swets & Zeitlinger, P.O. Box 825, 2160 SZ Lisse, the Netherlands** or to any subscription agent. Individuals should send their subscription direct to the publishers.

For advertisements, back volumes, and other information, please write to Swets & Zeitlinger, P.O. Box 825, 2160 SZ Lisse, the Netherlands. Fax: +31-252-415888.

**Journal of New Music Research** is published quarterly in March, June, September and December, by Swets & Zeitlinger B.V. Subscription price is US\$ 244 = Second Class postage.

Postmaster: send address corrections to Journal of New Music Research, c/o Mercury Airfreight International Ltd Inc., 2323 Randolph Avenue, AVENEL, New Jersey 07001, U.S.A.

## Photocopying

In the U.S.A.: This journal is registered at the Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, MA 01923.

Authorisation to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by Swets & Zeitlinger for users registered with the CCC provided that the base fee of \$6.00 per copy is paid directly to CCC. For those organisations that have been granted a photocopy licence by CCC a separate system of payment has been arranged. The fee code for users of the Transactional Reporting Service is 0929-8215/95 \$6.00.

Authorisation does not extend to other kinds of photocopying, such as for general distribution, for resale, for new publications, for advertising or promotion.

For all countries outside of the U.S.A., permission to photocopy must be obtained from the copyright owner. Please apply to Swets & Zeitlinger.

**Journal of New Music Research** is included in the following abstracting, citation, and information retrieval systems:

Arts & Humanities Citation Index, Current Contents/Arts & Humanities, INSPEC., RILM abstracts, The Music Index.

Printed on acid-free paper.

© Copyright 1995 by Swets & Zeitlinger.

## AUTHOR INDEX

- Allouche, J.-P., 97  
 Ariyoshi, Y., 130  
 Bruin, G. de, 148  
 Cohen, D., 197, 342  
 Conklin, D., 51  
 Cooper, D., 74  
 Desainte-Catherine, M., 392  
 Di Scipio, A., 34, 80, 369  
 Dubnov, S., 342  
 Haus, G., 230  
 Hernoux, B., 301  
 Horner, A., 318  
 Huopaniemi, J., 301  
 Jeger-Granot, R., 197  
 Johnson, T., 97  
 Kaipainen, M., 282  
 Karjalainen, M., 301  
 Landy, L., 398  
 Leman, M., 84, 95  
 Louhivuori, J., 5, 282  
 Miyahara, H., 130  
 Moisala, P., 8  
 Olk, F., 164  
 Povall, R., 109  
 Rocha Iturbide, M., 384  
 Sametti, A., 230  
 Schneider, A., 164  
 Seifert, U., 164  
 Shimojo, S., 130  
 Smoliar, S.W., 21  
 Tanguiane, A., 247  
 Taube, H., 121  
 Tishby, N., 342  
 Toiviainen, P., 282  
 Välimäki, V., 301  
 Walsteijn, M. van, 148  
 Witten, I.H., 51



## CONTENTS INDEX

*Jean-Paul Allouche and Tom Johnson:*

Finite Automata and Morphisms in Assisted Musical Composition . . . . . 97

*Yusuke Ariyoshi, Shinji Shimojo and Hideo Miyahara:*

Hyperscore: A Design of a Hypertext Model for Musical Expression  
and Structure . . . . . 130

*Gijs de Bruin and Maarten van Walstijn:*

Physical Models of Wind Instruments: A Generalized Excitation Coupled  
with a Modular Tube Simulation Platform . . . . . 148

Call for Papers . . . . . 89

*Dalia Cohen and Roni Jeger-Granot:*

Constant and Variable Influences on Stages of Musical Activities . . . . . 197

*Darrell Conklin and Ian H. Witten:*

Multiple Viewpoint Systems for Music Prediction . . . . . 51

*Agostino Di Scipio:*

Centrality of *Techné* for an Aesthetic Approach on Electroacoustic  
Music . . . . . 369

*Agostino Di Scipio:*

Inseparable Models of Materials and of Musical Design in Electroacoustic  
and Computer Music . . . . . 34

*Shlomo Dubnov, Naftali Tishby and Dalia Cohen:*

Hearing Beyond the Spectrum . . . . . 342

*Goffredo Haus and Alberto Sametti:*

Score Analysis/Resynthesis Environment of the "Intelligent Music  
Workstation" . . . . . 230

*Andrew Horner:*

Envelope Matching with Genetic Algorithms .....	318
---	-----

*Matti Karjalainen, Vesa Välimäki, Bertrand Hernoux and Jyri Huopaniemi:*

Explorations of Wind Instruments Using Digital Signal Processing and Physical Modeling Techniques .....	301
--	-----

*Marc Leman:*

Introduction .....	95
--------------------	----

*Jukka Louhivuori:*

Preface .....	5
---------------	---

*Pirkko Moisala:*

Cognitive Study of Music as Culture - Basic Premises for "Cognitive Ethnomusicology" .....	8
---	---

*Richard Povall:*

Compositional Methods in Interactive Performance Environments .....	109
---	-----

Publishers Note .....	1
-----------------------	---

*Manuel Rocha Iturbide:*

Unfolding the Natural Sound Object through Electroacoustic Composition .....	384
---	-----

*Uwe Seifert, Fabian Olk and Albrecht Schneider:*

On Rhythm Perception: Theoretical Issues, Empirical Findings .....	164
--	-----

*Stephen W. Smoliar:*

Parsing, Structure, Memory and Affect .....	21
---	----

*Heinrich Taube:*

An Object-Oriented Representation for Musical Pattern Definition .....	121
--	-----

*Andranik Tanguiane:*

Towards Axiomatization of Music Perception .....	247
--	-----

*Petri Toiviainen, Mauri Kaipainen and Jukka Louhivuori:*

Musical Timbre: Similarity Ratings Correlate With Computational Feature Space Distances .....	282
--	-----

## Book Reviews

Sophie Fuller and Nicola (eds.), <i>Reclaiming the Muse</i> .	
Reviewed by Leigh Landy .....	398
Goffredo Haus (ed.), <i>Music Processing</i> .	
Reviewed by Myriam Desainte-Catherine .....	392
John R. Pierce, <i>The Science of Musical Sound</i> .	
Reviewed by Agostino Di Scipio .....	80
Matt Smith, Alan Smaill and Geraint A. Wiggins (eds), <i>Music Education: An Artificial Intelligence Approach</i> .	
Reviewed by David Cooper .....	74
Andranick S. Tanguiane, <i>Artificial Perception and Music Recognition</i> .	
Reviewed by Marc Leman .....	84